



# SUBSTITUTE SPECIFICATION

RECEIVING APPARATUS, PRINTING APPARATUS, AND FIRMWARE  
UPDATING SYSTEM

## BACKGROUND OF THE INVENTION

### 1. Field of the Invention

The present invention relates to a firmware updating system  
for updating a firmware of a printer.

### 2. Description of the Related Art

Recently, along with digitization of TV broadcasts, various  
services became available to the users who watch TV. Among these  
services, for example, in case of home shopping, e-mail delivery or  
timetable guide where there is a necessity to reconfirm the services  
and the information they received, there are many cases where it is  
convenient for the users to keep at hand a list of names of the  
products or the e-mails they received, after checking beforehand  
the details of desired information on the TV screen. Therefore, a  
system to receive information from a receiving apparatus such as a  
Set Top Box (STB) and a Digital TV (DTV) so as to print the received  
information with the printer which is directly connected to the  
receiving apparatus is useful. Under this system, the STB or the  
DTV is connected to the printer via an I/F such as an IEEE1394 bus  
or the like. The following is an explanation of a case where a  
receiving apparatus is an STB, but the same applies to the case of  
using a DTV.

The broadcast content delivered through the TV broadcast as  
mentioned above is described with Broadcast Markup Language  
(BML) so as to start the broadcasting. It is, however, possible to  
use other markup language, for instance, Hyper Text Markup  
Language (HTML). Each file in the broadcast content described  
with these languages is objectified by a Document Object Model  
(DOM), a general-purpose Application Programming Interface (API),